

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A computer accessible memory medium comprising program instructions, wherein the program instructions are executable by a processor to implement:

displaying a palette, including a display window comprising a plurality of graphical program nodes for use in a graphical program, wherein each graphical program node comprises an icon and program code, wherein each graphical program node is represented by the graphical program node's respective icon in the palette and is selectable from the palette for inclusion in the graphical program;

wherein the plurality of graphical program nodes ~~comprise a hierarchy of graphical program nodes, wherein said hierarchy comprises:~~

a first plurality of function nodes displayed in the display window, wherein each function node corresponds to a respective functionality; and

a second plurality of property nodes displayed in the display window, wherein each property node corresponds to a respective one of at least a subset of the plurality of function nodes, wherein each property node is displayed proximate to said respective one of the at least a subset of the plurality of function nodes.

2. (Previously Presented) The memory medium of claim 1,

wherein each of the first plurality of function nodes comprises a polymorphic function node; and

wherein each polymorphic function node corresponds to a respective generic functionality, wherein each function node is type-switchable between each of a plurality of function node types, and wherein each function node type corresponds to a respective specific functionality.

3. (Previously Presented) The memory medium of claim 2,

wherein each of the first plurality of function nodes has a default function node type, and wherein the default function node type corresponds to a respective default specific functionality for the function node.

4. (Previously Presented) The memory medium of claim 1,
wherein the first plurality of function nodes are organized in the display window in accordance with one or more of:

- order of use in a typical graphical program development session;
- frequency of use in a typical graphical program development session; or
- functional relationships among the first plurality of function nodes.

5. (Previously Presented) The memory medium of claim 1,
wherein the first plurality of function nodes comprises two or more of:

- a channel creation node;
- a read node; or
- a write node.

6. (Previously Presented) The memory medium of claim 5,
wherein the first plurality of function nodes further comprises:
a wait until done node.

7. (Previously Presented) The memory medium of claim 5,
wherein the two or more of the channel creation node, the read node, and the write node comprise a primary set of function nodes.

8. (Previously Presented) The memory medium of claim 7,
wherein the first plurality of function nodes further comprises one or more of:

- a timing node;
- a triggering node;
- a start node;
- a stop node; or

a clear node.

9. (Previously Presented) The memory medium of claim 8,
wherein the one or more of the timing node, the triggering node, the start node, the stop node, and the clear node comprise a secondary set of function nodes; and
wherein the primary set of function nodes and the secondary set of function nodes are displayed in the display window in respective groups.
10. (Previously Presented) The memory medium of claim 9, wherein, in displaying the primary set of function nodes and the secondary set of function nodes in the display window in respective groups, the primary set of function nodes is displayed in a first row in the display window and the secondary set of function nodes is displayed in a second row in the display window.
11. (Previously Presented) The memory medium of claim 9, wherein, in displaying the primary set of function nodes and the secondary set of function nodes in the display window in respective groups, the primary set of function nodes is displayed in a first column in the display window and the secondary set of function nodes is displayed in a second column in the display window.
12. (Previously Presented) The memory medium of claim 1,
wherein each of the second plurality of property nodes comprises a function specific property node corresponding to a respective function; and
wherein each function specific property node comprises one or more parameters for configuring corresponding attributes for the graphical program.
13. (Previously Presented) The memory medium of claim 12, wherein the second plurality of property nodes comprises two or more of:
a channel property node;
a timing property node;
a triggering property node;

a read property node; or
a write property node.

14. (Previously Presented) The memory medium of claim 13, wherein, in each property node being displayed proximate to the respective one of the at least a subset of the plurality of function nodes, each property node is displayed in one of:

a common row with the respective one of the at least a subset of the plurality of function nodes; or

a common column with the respective one of the at least a subset of the plurality of function nodes.

15. (Previously Presented) The memory medium of claim 1,

wherein each function node comprises a function node icon, and wherein the function node icon comprises a first image;

wherein each property node comprises a property node icon and wherein the function node icon comprises a second image; and

wherein the second image comprises a version of the first image, indicating the correspondence between the property node and the corresponding function node.

16. (Previously Presented) The memory medium of claim 1, wherein the program instructions are further executable to implement:

displaying one or more tool icons in the display window, wherein each tool icon represents a respective graphical program development tool, and wherein each tool icon is user-selectable to invoke the respective graphical program development tool.

17. (Previously Presented) The memory medium of claim 1, wherein the program instructions are further executable to implement:

displaying one or more function palette icons in the display window, wherein each function palette icon represents a respective sub-palette of one or more additional function nodes and/or one or more additional function palettes.

18. (Previously Presented) The memory medium of claim 17, wherein the one or more function palette icons are user-selectable to invoke display of one or more of:

a palette of function nodes related to advanced device configuration;

a palette of function nodes related to advanced task configuration; or

a palette of one or more additional sub-palettes comprising miscellaneous advanced function nodes.

19. - 25. (Cancelled)

26. (Previously Presented) The memory medium of claim 1,

wherein the first plurality of function nodes comprises a generic read node and a generic write node; and

wherein each property node corresponds to one of the generic read node or the generic write node, and wherein the second plurality of property nodes comprises one or more read property nodes associated with the generic read node and one or more write property nodes associated with the generic write node.

27. (Currently Amended) A method, comprising:

displaying a palette, including a display window comprising a plurality of graphical program nodes for use in a graphical program, wherein each graphical program node comprises an icon and program code, wherein each graphical program node is represented by the graphical program node's respective icon in the palette and is selectable from the palette for inclusion in the graphical program;

wherein the plurality of graphical program nodes ~~comprise a hierarchy of graphical program nodes, wherein said hierarchy comprises:~~

a first plurality of function nodes displayed in the display window, wherein each function node corresponds to a respective functionality; and

a second plurality of property nodes displayed in the display window, wherein each property node corresponds to a respective one of at least a subset of the

plurality of function nodes, wherein each property node is displayed proximate to said respective one of the at least a subset of the plurality of function nodes; and

including at least one function node of the first plurality of function nodes, and at least one property node of the second plurality of property nodes in a graphical program in response to user input.

28. (Currently Amended) A system for graphical programming, comprising:

a processor; and

a memory medium coupled to the processor, wherein the memory medium stores program instructions that are executable by the processor to:

display a palette, including a display window comprising a plurality of graphical program nodes for use in a graphical program, wherein each graphical program node comprises an icon and program code, wherein each graphical program node is represented by the graphical program node's respective icon in the palette and is selectable from the palette for inclusion in the graphical program;

wherein the plurality of graphical program nodes ~~comprise a hierarchy of graphical program nodes, wherein said hierarchy comprises:~~

a first plurality of function nodes displayed in the display window, wherein each function node corresponds to a respective functionality; and

a second plurality of property nodes displayed in the display window, wherein each property node corresponds to a respective one of at least a subset of the plurality of function nodes, wherein each property node is displayed proximate to said respective one of the at least a subset of the plurality of function nodes.